PS 681: INTERMEDIATE GAME THEORY. WINTER 2009

Arthur Lupia, University of Michigan.

Email: lupia@umich.edu, Phone: 647-7549, Website: www.umich.edu/~lupia
Class Time: Monday & Wednesday 10:00-11:30. Room: G449 Mason Hall.
Office Hours: Thursday 10:10-11:45, 6757 Haven Hall.

Primary Text
- Nolan McCarty and Adam Meirowitz. 2007. *Political Game Theory: An Introduction*. Cambridge University Press. (Henceforth denoted MM)

Description
The purpose of this course is to train students to apply game theoretic methods to political science problems. Skill development will be evaluated through a series of problem sets. Questions of research design and application will also be addressed. Towards the end of the course, we will hold a number of paper-based workshops where I will walk you through a discussion of modeling decisions that I have made as a way to prompt questions about research design and implementation of formal modeling strategies. The main premise of this class is that you will learn more about game theory by doing it rather than simply reading about it. Students wishing to integrate game-theoretic research designs into their own research can use this course as a basis for fully engaging in the department's new advanced offerings in formal modeling.

For every concept covered in the class, the proper evaluative standard is not whether or not you know the relevant definitions, it is whether you are capable of introducing the concepts into a wide range of research designs. Problem sets, class assignments, and a cumulative final will be the means by which I evaluate these capabilities.

Prerequisite. Political Science 598 or equivalent background is a prerequisite. In particular, you should have a good working knowledge of concepts listed in MM's mathematical appendix.

1/7 INTRODUCTION and EXPECTATIONS
A Lupia. 2000. "The Public Value of Political Science: Information for Buyers and Sellers." *PS* 33: 7-13.
A Lupia, MD McCubbins, and SL Popkin. 2000. "Incorporating Reason into the Study of Politics." In Arthur Lupia, Mathew D. McCubbins, and Samuel L. Popkin (eds.) *Elements of Reason: Cognition, Choice, and the Bounds of Rationality*. New York: Cambridge University Press, 1 - 20.

1/12 THE THEORY OF CHOICE. MM Chapters 1 and 2 (pp. 1-25).

1/14 CHOICE UNDER UNCERTAINTY. MM Chapter 3 (pp. 27-62).

1/21 Workshop on Exercises 2.1-2.5,; 3.1-7. Exercises due at the beginning of class. Then, the class, as a whole, works through the logic of the problem in the workshop. Controversies and questions are addressed.

1/26 SOCIAL CHOICE THEORY, MM Chapter 4 (pp. 66-85).

1/28, 2/2 GAMES IN THE NORMAL FORM, MM Chapter 5 (pp. 87-145)

2/4 Workshop on Exercises 4.1, 4-7; 5.1-10.

2/9 BAYESIAN GAMES IN THE NORMAL FORM, MM Ch. 6 (pp. 150-169)

2/11 Workshop on Exercises 5: 11, 12, 23-24; 6: 1-5.

2/16-18 EXTENSIVE FORM GAMES, MM Chapter 7, Sections 1-5.1 (pp. 171-188)

3/2 ARTICLE WORKSHOP 1 . ER GERBER, A LUPIA, AND MD MCCUBBINS. 2004. "WHEN DOES GOVERNMENT LIMIT THE IMPACT OF VOTER INITIATIVES? THE POLITICS OF IMPLEMENTATION AND ENFORCEMENT" *JOP* 66: 43-68.

3/4 Workshop on Exercises from Chapter 7. Exercises 1,2, 4-7.

3/9, 11 DYNAMIC GAMES OF INCOMPLETE INFO, MM Chapter 8, Sections 1-3, 6 (p. 204-226, 236-250)

3/16 Workshop on Exercises from Chapter 8. Exercises 1-12.

3/18 ARTICLE WORKSHOP 2. A LUPIA. 1992. "BUSY VOTERS, AGENDA CONTROL, AND THE POWER OF INFORMATION." *APSR* 86: 390-403.

3/23 REPEATED GAMES, MM Chapter 9 (pp. 251-273)

3/25 Workshop on Exercises from Chapter 9. Exercises 1,2, 4-8.

3/30 BARGAINING THEORY, MM Chapter 10 (pp. 275-318)

4/1 ARTICLE WORKSHOP 3. A LUPIA AND K STROM. 1995. COALITION TERMINATION AND THE STRATEGIC TIMING OF PARLIAMENTARY ELECTIONS. *APSR* 89: 648-665.

4/6 No class. Midwest Meetings.

4/8 Workshop on Exercises from Chapter 10. Exercises 1-10.

4/13 MECHANISM DESIGN, MM Chapter 11, Sections 1-7.1 (pp. 320-346).

4/15 ARTICLE WORKSHOP 4.
- JD HUBER AND A LUPIA. 2001. "CABINET INSTABILITY AND DELEGATION IN PARLIAMENTARY DEMOCRACIES." *AJPS* 45: 18-32.
- A LUPIA and JO MENNING. 2009. "WHEN CAN POLITICIANS SCARE CITIZENS INTO SUPPORTING BAD POLICIES." *AJPS* 53: 90-106.

4/20 Workshop on Exercises from Chapter 11. Exercises 1-9

GRADING.
- Problem Sets: 8@ 10 percent each. Your problem set grade will depend mostly on handing in an electronic version of the problem set with your answers that also present your logic efficiently. However, in the problem workshops if you are unable to complete the question in class, you will not receive credit for the electronic version of that problem. I will use a random mechanism to determine who I call upon for each question. You will receive up to one week advance notice of your presentational assignment. Throughout the course every student will be called upon an equal number of times in the problem workshops.
- Class Participation in Problem/Paper Workshops: 10 percent. At problem workshops, my hope is that you will explain problems to each other. I hope to step in only when necessary.
    - o The paper workshops will focus on two things.
        - ▪ Research design questions
        - ▪ Logic questions
- Final Exam: 10 percent. The final will be cumulative. It will consist of variations of problems seen in the problem sets. By this point in the class, I expect you to perform well on the exam not because you care about the grade, but because you understand the value of formal modeling to your research agenda.